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A new genus and species of micropterous Oriental Aradidae (Hemiptera, Heteroptera, Aradidae)

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A b s t r a c t : From Sikkim, Northern India, a new micropterous Mezirinae genus, *Sikkimocoris* nov.gen is described to accommodate the type species *S. rumtek* nov.sp. A second species of the so far monotypic genus *Pahangiessa* HEISS 1993, *P. schuhi* nov.sp. is described from Malaysia and an additional record for *P. bulboscutellata* is given. Structural details are illustrated and photographs are given for all species.

K e y w o r d s : Heteroptera, Aradidae, Mezirinae, new genus, new species, micropterous, Sikkim, Malaysia.

Introduction

Although several new taxa of Oriental Aradidae were described since the publication of KORMILEV & FROESCHNER' s basic synonymic list of the "Flat Bugs of the World" (1987), the actually existing fauna of this family is still insufficiently explored. This is particularly valid for those specimens showing a cryptic life cycle and a limited expansion range as apterous, micropterous or brachypterous taxa occurring predominantly in subtropical and tropical forests.

They are also the most endangered species, as due to the increasing devastation of primary rainforests by extensive logging or for agricultural purposes, numerous taxa will be extinct before they can be discovered and described.

Material and Methods

The material upon this study is based are micropterous specimens from Northern India and Malaysia and are held in the collection of the author (CEHI). They were cleaned from the usual incrustation which obscures the abdominal structures and important fusion lines before examining them under a WILD M7 binocular microscope.

Measurements were taken with a micrometer eyepiece, 20 units = 1mm, unless otherwise stated. The length of head was measured from apex of genae to the posterior margin delimiting the vertex (in brackets) and – including the variable length of the collar – to the anterior margin of the pronotum.

Taxonomy

Subfamily Mezirinae

Sikkimocoris nov.gen.

Type species: *Sikkimocoris rumtek* nov.sp.

D i a g n o s i s : The new genus resembles habitually the micropterous genera of Oriental Mezirinae *Bengalaria* HEISS 1982, from Northern India and Nepal and *Pahangiessa* HEISS 1993, from Malaysia. Both are however distinguished from *Sikkimocoris* by their different structures of body, particularly of the scutellum and the development of the reduced alary sclerites and the elevations on the tergal plate.

D e s c r i p t i o n : Micropterous, body of oval outline; surface shiny, smooth areas with distinct punctures; elevated ridges on head, thorax and abdomen are granulate with yellowish curled pilosity which is also present on legs and antennae.

H e a d : Slightly longer than wide across eyes, genae long and thin exceeding apex of clypeus, contiguous in front with acute apex; antenniferous lobes blunt and rounded anteriorly; antennae less than twice as long as width of head, segment I longest and thickest followed by shorter and thinner ones; eyes globose and slightly stylate; post-ocular lobes straight converging posteriorly, angulate before the collar; vertex longitudinally raised, beset with setigerous granules; rostrum arising from a slit like atrium, rostral groove shorter than head, carinate laterally and closed posteriorly.

P r o n o t u m : Transverse, anterior margin with a ring like collar; anterolateral lobes expanded and carinate, sublaterally with 2 (1+1) anteriorly converging carinae; disk with punctured surface and a median depression separated by a transverse groove from straight and elevated posterior margin.

S c u t e l l u m : Subtriangular, lateral margins sinuate and carinate, posterior margin broadly rounded; disk with a high round elevation with setigerous granulation.

H e m e l y t r a : Reduced to small subround sclerites lateral of the scutellum, anterolateral angles carinate and pilose, posteromedially with a granulate elevation.

M e t a n o t u m : Consisting of 2 (1+1) sclerites lateral of the scutellum; lateral margins carinate and pilose, surface punctured; posterior margins sinuate, separated from fused tergites I+II by a thin suture; reflexed metathoracic scent gland canals visible laterally in front of metanotum.

T e r g i t e s I+II: consisting of an inner triangular sclerite posterior to the metanotum and a triangular fused laterotergite extending along the lateral margin of metanotum on each side.

A b d o m e n : Tergal plate reaching from scutellum to posterior margin of mediotergite (mtg) VI; anterolateral margins converging to scutellum, lateral margins slightly rounded, posterior margin straight; disk medially elevated on mtg III-V, laterally with oval smooth depressions on mtg III-VI bearing the apodemal impressions (glabrous spots); dorsal external laterotergites (deltg) with carinate slightly produced posterolateral angles, lateral margins pilose; posterolateral lobes of tergite VII angulate.

V e n t e r : Sternites with usual pattern (2:2:1) of apodemal impressions, surface smooth

at middle, punctured laterally; spiracles II-VI ventral, far from lateral margin, VII sublateral but hardly visible from above, VIII terminal.

Legs : Finely granulate and pilose; preapical comb on fore tibiae present.

Etyymology : Named after the Indian Province of Sikkim, where the specimens were discovered.

***Sikkimocoris rumtek* nov.sp. (Fig. 5-8; photo 1, 2)**

Material examined : Holotype ♂: India, Sikkim, Rumtek Monastery at 2000m, 7.IV.1999 E. Heiss lg.; paratypes: 3 ♀♀ collected with holotype.

Description : Male, micropterous, colouration dark brown to blackish, surface shiny. As the structures are described for the genus, only few additional data are given.

Head : Longer than wide (28 (24)/ 22.5); antennae 1.92x as long as width of head, segment I club shaped, longest and thickest, II and III shorter and thinner, IV shortest and clavate, length of segments I/II/III/IV = 14/9/12/8.

Pronotum : Of subrectangular shape, at posterior lobes more than 3x as wide as long at middle (33/10), at anterolateral angles narrower (31) but rounded and not produced over ring like collar.

Scutellum : Wider than long (26/18), median hump highest on anterior half beset with fine setigerous granulation, disk laterally with punctures.

Hemelytra : Wing pad sclerites without clavus or traces of membrane.

Abdomen : Oval, posterolateral angles of deltg II-VI carinate and slightly produced laterally, those of deltg VII without a carina and angulately directed posteriorly; tergal plate consisting of mtg III-VI, with a median longitudinal elevation on mtg III-IV which is highest and widest on mtg III, scent gland scars are marked on mtg IV and V.

Genitalic structures : Pygophore pyriform attenuated posteriorly, paramers as fig. 5-8, paratergites VIII small and clavate, shorter than the pygophore.

Measurements : Length 5.5mm; length of antennae 2.15mm; width of abdomen across tergite IV 2.5mm.

Female : Basically as male but of larger size and wider and more rounded abdomen, tergite VII with a curved median transverse carina on posterior half, posterolateral angles roundedly produced; segment VIII bilobate, shorter than visible tricuspidate tergite IX+X.

Measurements : Length of the three specimens: 6.5, 6.8 and 6.9mm; ratio length of antennae / width of head 1.86, 1.85 and 1.88; length of antennal segments I/II/III/IV = 15/10/13.5/18 – 15/10/14/9 – 16/11/14/8.

Etyymology : Named after the important Buddhist Monastery Rumtek west of the Sikkim capital Gangtok; in its environment this species was collected.

***Pahangiessa schuhi* nov.sp. (Fig. 3, 4; photo 3)**

Material examined : Holotype ♂: Malaysia, Pahang, Cameron Highlands Gn. (Gunung Beremban 1600-1800m, 29.VII.1993 R. Schuh lg. CEHI.

The genus *Pahangiessa* HEISS 1993, was described to include the only know type species

P. bulboscutellata from Malaysia, Cameron Highlands, Gunung Batu Brinchang at 1800m. *Pahangiessa schuhi* nov.sp. was collected on another mountain and represents the second species of this genus differing in several characters from *P. bulboscutellata* as follows.

D i a g n o s i s : Closely related and of the same size as *P. bulboscutellata* but is easily distinguished by the following set of characters (those of *P. bulboscutellata* in brackets):

Antennae longer, 1.27x as long as width of head (1.14x); pronotum less transverse, 2.73x as wide as long (3.08x); scutellum with a longitudinal ridge (high round hump); polygonal hemelytral sclerite anterolaterally roundedly expanded, obscuring the reflexed metathoracic scent gland canal from above (anterolateral margin not expanded, straight and carinate, scent gland canal distinctly visible from above); median elevation on tergal plate small (much higher); pilosity on body, antennae and legs short, its length about half the diameter of the tibiae (longer, as long as the diameter).

D e s c r i p t i o n : Male, micropterous; colouration dark brown, surface shiny, body legs and antennae covered with fine setigerous granulation.

H e a d : Much wider than long 27.5 (25) / 25; genae longer than clypeus, diverging anteriorly, their apex rounded, as long as antennal segment I; antenniferous lobes laterally bent and diverging anteriorly, apices blunt; antennae 1.27x as long as width of head (35/27.5), length of segments I/II/III/IV = 8.5/7.5/8.5/3.5, eyes globose, slightly stylate; postocular tubercles acute, reaching outer margin of eyes; rostrum arising from a slit like atrium, rostral groove closed posteriorly.

P r o n o t u m : 2.73x as wide as long at middle; lateral margins straight, subparallel, anterolateral angles roundedly expanded and slightly reflexed; collar ring like; disk with 2 (1+1) median granulate oval elevations.

S c u t e l l u m : Subtriangular, about twice as wide as long (25/13); lateral margins carinate, median longitudinal elevation ridge like.

H e m e l y t r a : Of polygonal shape lateral of scutellum; anterolateral lobes expanded and rounded, obscuring the metathoracic scent gland canal from above.

M e t a n o t u m : Visible as small transverse sclerites posterior of the hemelytra which are medially not connected and separated by the scutellum. Tergites I+II fused into a strongly transverse medially carinate sclerite, their fused deltg I+II triangular, reaching to the rounded lateral lobes of the hemelytra.

A b d o m e n : Lateral margins of tergal plate constricted posteriorly, median elevation highest between mtg III and IV, then sloping posteriorly; lateral margins of deltg II-VII straight, posteroexterior angles slightly carinate and produced.

G e n i t a l i c s t r u c t u r e s : Pygophore pyriform, paratergite VIII clavate and shorter than pygophore; the single specimen was not dissected.

V e n t e r : Spiracles II-VI ventral and far from lateral margin, VII closer to the margin but not visible from above, VIII terminal and visible from above.

M e a s u r e m e n t s : Length 5.4mm; width of abdomen 2.85.

E t y m o l o g y : Dedicated to my Coleopterist friend Rudolf Schuh (Wiener Neustadt), who collected this and many other interesting Aradidae in several countries, always generously presenting them to me for further studies and for my special collection of flat bugs.

***Pahangiessa bulboscutellata* HEISS 1993 (Fig. 1, 2; photo 4)**

As only the type specimens are known to date, a new record is presented here:

1♂, Malaysia, Pahang, Cameron Highlands, Tanah Rata env., Gg. Beremban 1400m, 28.IV.1997 Schuh & Lang lg. (CEHI).

Remarks: As both these micropterous species were found as well as on different mountains of the same area or on the same one (Gn. Beremban) at different altitudes it can be expected, that they represent endemic taxa with very limited distribution range. Most probably there might occur further species of this genus on other mountains of the Cameron Highlands.

Acknowledgments

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Zusammenfassung

Aus Sikkim, Nordindien, wurde *Sikkimocoris* nov.gen., eine Wanzen-gattung aus der Unterfamilie der Mezirinae, beschrieben. Als Typenspezies wird *Sikkimocoris rumtek* nov.sp. vorgestellt. Weiters wurden *Pahangiessa schuhi*, eine zweite Art der bislang monotypischen Gattung, aus Malaysia beschrieben, sowie ein weiterer Nachweis von *P. bulboscutellata* angeführt. Zeichnungen morphologischer Details sowie Habitusphotos ergänzen die Arbeit.

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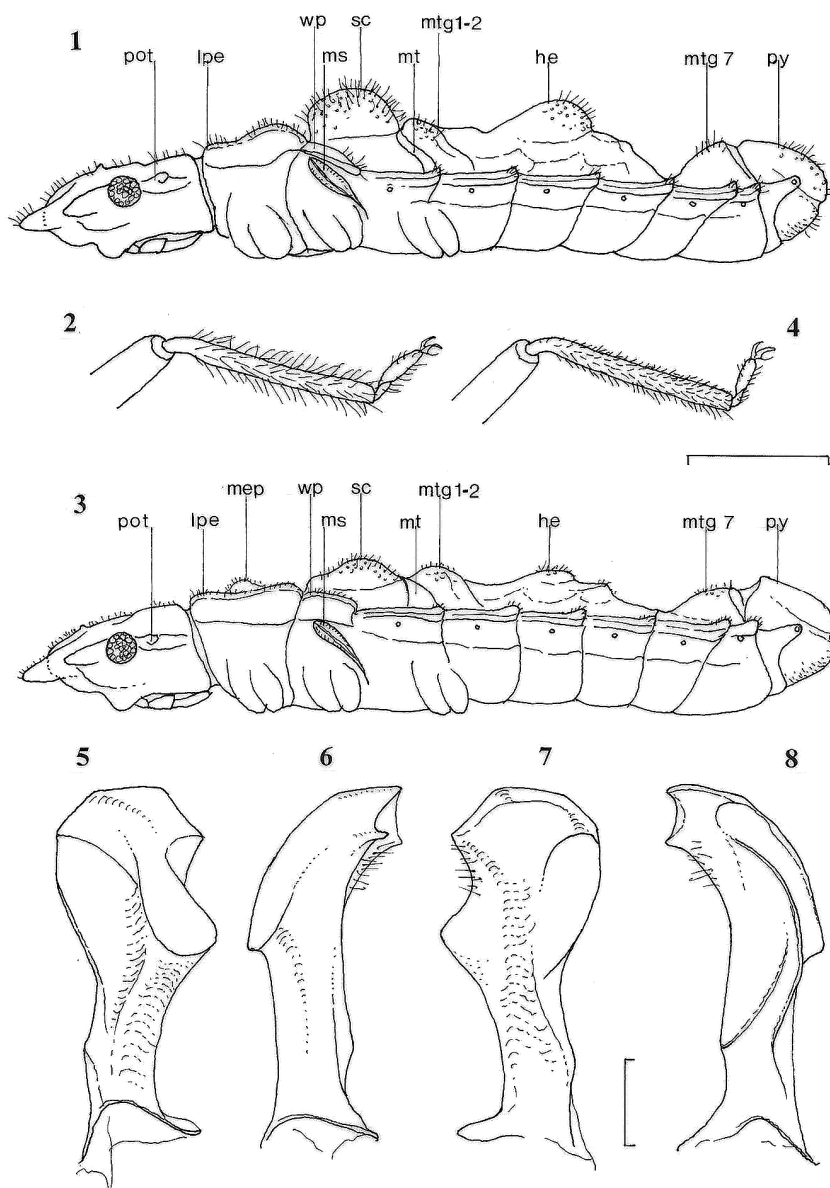


Fig. 1-8: (1, 2) *Pahangiessa bulboscuteallata*; (3, 4) *Pahangiessa schuhi* nov.sp.; 1, 3 lateral view; 2, 4 right hind leg.; (5-8) *Sikkimocoris rumtek* nov.sp., paramere in different positions. Abbreviations: he – highest elevation on tergal plate; lpe – lateral pronotal expansion; mep – median elevation of pronotum; ms – metathoracic scent gland canal; mt – metanotum; mtg 1, 2 – fused mediotergites 1 and 2; mtg 7 – mediotergite 7; pot – postocular tubercle; py – pygophore; sc – scutellar hump or elevation; wp – reflexed lateral margin of wingpad. Scale 1 mm for fig. 1-4; 0.1mm for fig. 5-8.



Photo 1-4: (1) *Sikkimocoris rumtek* nov.gen., nov.sp. holotype ♂, dorsal view; (2) *Sikkimocoris rumtek* nov.sp. paratype ♀, dorsal view; (3) *Pahangiessa schuhi* nov.sp. holotype ♂, dorsal view; (4) *Pahangiessa bulboscutellata* ♂, dorsal view.